



NORSK LUFTAMBULANSE
NORWEGIAN AIR AMBULANCE



Incident title: School shooting at Jokela School Centre, Finland

Reporter

Incident location

Dr. Timo Jama

Medical Director of EMS
Päijät-Häme Social and Health Care
Group

Role in incident: Incident
Commander (working duty
officer/HEMS physician at that
time)



Summary

Country:  Finland

Eight people (the principle, school nurse and six young high school students) were killed by a student at the school who opened fire on school premises. The shooter shot himself and died afterwards in hospital.

EMS background

1. Was an EMS coordinating centre (the centre responsible for dispatching and coordinating EMS units on-scene) available in the affected country/ies before the incident? *	Yes
2. Does a dialling number to Emergency Services exist? *	Yes
2-1. Is there a single and unique dialling number to EMS or one common dialling number for all Emergency Services (fire, police and EMS)? *	One common dialling number for all Emergency Services
3. Can a major incident be declared directly by the person receiving an alert at the EMS coordinating centre? *	No
4. What is the background of staff in the every-day/normal staffing of EMS services? *	<ul style="list-style-type: none"> • Basic Life Support by EMS professionals, non-physician • Advanced Life Support by EMS professional, non-physician • Advanced Life Support On-scene by Physician
5. What other resources are routinely available to assist the EMS service in a normal setting? *	<ul style="list-style-type: none"> • Fire brigade • Police • Coast guard
6. Other resources that can be mobilized in a major incident *	<ul style="list-style-type: none"> • Voluntary organizations • Military
6-1. Please specify which voluntary organizations are available *	Red Cross, Voluntary Rescue Service
6-2. Please specify if the voluntary organizations available require authorization from police or other authorities to participate in the response phase *	no, EMS can alert all resources by themselves
7-1. Are there any regional hospital/s with trauma specialty that exists within the EMS catchment system that was affected by the major incident? *	Yes
7-1.1. Please state the number of regional hospital/s with trauma specialty within the EMS catchment system that was affected by the major	2

incident *

7-1.2. Is the number given above exact or estimated? * Exact

7-2. Are there any regional hospital/s without trauma specialty that exists within the EMS catchment system that was affected by the major incident? * Yes

7-2.1. Please state the number of regional hospitals without trauma specialty within the EMS catchment system that was affected by the major incident * 1

7-2.2. Is the number given above exact or estimated? * Exact

7-3. Are there any local hospital/s without trauma specialty that exists within the EMS catchment system that was affected by the major incident? * No

7-4. Are there any other type of hospital/s that exists within the EMS catchment system that was affected by the major incident? * No

8-1. Is a pre-hospital on-scene triage system in use daily on a national level? * Yes

8-1.1. Please specify which pre-hospital on-scene triage system/s are in use daily on a national level: * START

8-2. Is a pre-hospital on-scene triage system in use daily on regional levels? * Yes

8-2.1. Please specify which pre-hospital on-scene triage system/s are in use daily on regional levels: * START

9-1. Is a pre-hospital on-scene triage system for major incidents in use on a national level? * Yes

9-1.1. Please specify which pre-hospital on-scene triage system/s for major incidents are in use on a national level: * START

9-2. Is a pre-hospital on-scene triage system for major incidents in use on regional levels? * Yes

10. Does the pre-hospital on-scene triage system for major incidents include direct tagging/labelling of patients? * Yes

11. For those employees within the pre-hospital No

**EMS system who are intended to work on-scene:
is major incident training mandatory? ***

Incident characteristics

12. What was the mechanism/external factor that caused the incident? * Other / Unknown

12-2. Please specify other mechanism/external factor that caused the incident: Shooting

12-3. Is this incident coupled to another incident? * No

13. What was the location of the incident scene? * Public facility

14-1. Did the EMS make use of wheeled vehicles to access patients for treatment at incident scene? * Yes

14-1.1. Were there any delays in accessing patients by wheeled vehicles? * Yes

14-1.2. Please describe reasons for delay, which could include reasons such as: security issues, congested roads due to traffic, weather conditions: * Security (it took 2 hours until police declared the area safe)

14-2. Did the EMS make use of railway system to access patients for treatment at incident scene? * No

14-3. Did the EMS make use of air transport to access patients for treatment at incident scene? * No

14-4. Did the EMS make use of boat transport to access patients for treatment at incident scene? * No

14-5. Did the EMS access patients for treatment at incident scene on foot? * No

14-6. Did the EMS make use of other means to access patients for treatment at incident scene? * No

15-1. Did the EMS make use of wheeled vehicles to evacuate patients from the incident scene? * Yes

15-1.1. Were there any delays in evacuating patients by wheeled vehicles? * Yes

15-1.2. Please describe reasons for delay, which For security

could include reasons such as: security issues, congested roads due to traffic, weather conditions: *

15-2. Did the EMS make use of railway system to evacuate patients from the incident scene? * No

15-3. Did the EMS make use of air transport to evacuate patients from the incident scene? * No

15-4. Did the EMS make use of boat transport to evacuate patients from the incident scene? * No

15-5. Did the EMS evacuate patients from the incident scene on foot? * No

15-6. Did the EMS make use of other means to evacuate patients from the incident scene? * No

16-1. Was there damage to electrical power that affected EMS response? * No

16-2. Was there damage to telecommunication that affected EMS response? * Yes

16-2.1. Please specify damage to telecommunication and how it affected EMS response * Tetra network was loaded heavily and was unable to function for a while

16-3. Was there damage to other modes of communications that affected EMS response? * Yes

16-3.1. Please specify damage to other modes of communication and how it affected EMS response * GSM link was also too loaded

16-4. Was there damage to road that affected EMS response? * No

16-5. Was there damage to rail that affected EMS response? * No

16-6. Was there damage to the EMS or health structure that affected EMS response? * No

16-7. Was there other damage to infrastructure that affected EMS response? * No

17. How many sites required separate EMS infrastructure (such as on-scene leadership and casualty clearing stations) in the response phase? * 3

17-1. Is the number given above exact or estimated? * Exact

18-1. Was ongoing violence or risk of further Yes

violence a threat to rescuers on scene? *

18-1.2. Please specify the ongoing violence or risk of further violence and how this affected the rescuers on scene * Shooter still in the building

18-2. Was fire a threat to rescuers on scene? * Yes

18-2.2. Please specify the fire and how this affected the rescuers on scene * Shooter tried to set fire to the building by dispersing liquid propellant, but was unsuccessful in his attempt

18-3. Was collapsing building/s a threat to rescuers on scene? * No

18-4. Was climate a threat to rescuers on scene? * No

18-5. Was lack of electricity a threat to rescuers on scene? * No

18-6. Was lack of water/food a threat to rescuers on scene? * No

18-7. Were other hazard/s a threat to rescuers on scene? * No

19-1. Was on going violence or risk of further violence a threat to patients on scene? * Yes

19-1.2. Please specify the on going violence/risk of further violence and how this affected the patients on scene * Many people already shot down

18-2. Was fire a threat to patients on scene? * No

19-3. Was collapsing building/s a threat to patients on scene? * No

19-4. Was climate a threat to patients on scene? * No

19-5. Was lack of electricity a threat to patients on scene? * No

19-6. Was lack of lack of water/food a threat to patients on scene? * No

19-7. Were other hazard/s a threat to patients on scene? * No

EMS response data

20-1. Did the first medical team to arrive on-scene assume the role of medical commander? *	Yes
20-1.1. If possible, please provide the time the first medical team to arrive on-scene assumed the role of medical commander	2007-11-07
Hour	11
Minutes	55
20-1.2. Is the time given above exact or estimated? *	Exact
20-2. Did the first medical team to arrive on-scene begin to make an assessment of scene safety? *	Unknown
20-3. Did the first medical team to arrive on-scene communicate a situation report to EMS coordinating centre? *	Yes
20-3.1. Was this done according to a pre-existing system or mnemonic? (E.g. METHANE)? *	No
20-3.3. If possible, please provide the time the first medical team to arrive on-scene communicated a performed situation report to EMS coordinating centre	2007-11-07
Hour	11
Minutes	56
20-3.4. Is the time given above exact or estimated? *	Estimated
20-4. Did the first medical team to arrive on-scene request additional resources? *	Yes
20-4.1. Please specify what type of resources where requested *	3 more ambulances
20-4.2. If possible, please provide the time the first medical team to arrive on-scene requested additional resources	2007-11-07
Hour	11
Minutes	56
20-4.3. Is the time given above exact or estimated? *	Estimated
20-5. Did the first medical team to arrive on-	Yes

scene initiate any safety related actions? *

20-5.1. Please describe the safety related actions initiated by the first medical team to arrive on-scene *

asking EMS not to enter the hazard area

20-5.2. If possible, please provide the time the first medical team to arrive on-scene initiated any safety related actions

2007-11-07

Hour

12

Minutes

00

20-5.3. Is the time given above exact or estimated? *

Estimated

20-6. Did the first medical team to arrive on-scene delegate responsibility for other tasks on scene? *

Yes

20-6.1. Please describe which other tasks the first medical team to arrive on-scene delegated responsibility for *

asking sub leaders for treatment and transport

20-6.2. If possible, please provide the time the first medical team to arrive on-scene delegated the responsibility

2007-11-07

Hour

12

Minutes

00

20-6.3. Is the time given above exact or estimated? *

Estimated

20-7. What kind of medical personnel assumed the role of on-scene medical commander? *

First ALS unit on scene or a doctor unit

21. What time was summoning of additional medical staff to participate in the medical response initiated?

2007-11-07

Hour

12

Minutes

18

21-1. Additional medical staff who responded to the major incident was summoned by: *

- First medical team to arrive on-scene
- On-scene medical commander

21-2. Medical pre-hospital resources used in the major incident response was coordinated by: *

- First medical team to arrive on-scene
- On-scene medical commander
- EMS coordinating centre

21-3. Who was responsible for briefing medical staff of the situation during the pre-hospital major incident medical response? *	On-scene medical commander
22-1. Was communication achieved between medical personnel at the incident? *	Yes
22-1.1. Please state at which time communication between medical personnel at the incident was initiated	2007-11-07
Hour	12
Minutes	00
22-1.2. This communication was managed by: *	First medical team to arrive on-scene
22-2. Was communication achieved between the different task forces involved (police, fire fighters, health, political leaders etc)? *	Yes, between some of the task forces
22-2.3. Please specify between whom it was/was not achieved and between whom it should have been achieved *	police
22-3. Was communication achieved between the scene and the EMS coordinating centre? *	Yes
22-3.1 Please state at which time communication between the scene and EMS coordinating centre was initiated	2007-11-07
Hour	11
Minutes	56
22-3.2. This communication was managed by: *	First medical team to arrive on-scene
22-4. Was communication achieved between the scene and receiving hospital/s? *	Yes
22-4.1 Please state at which time communication between the scene and receiving hospital/s was initiated	2007-11-07
Hour	12
Minutes	25
22-4.2. This communication was managed by: *	On-scene medical commander
22-5. Was communication achieved between medical response personnel and the general public? *	No

22-5.4. Why was communication not achieved? *	Hospital Incident Commander at Töölö hospital is responsible for that
23. Describe the structure of the medical incident command during the major incident *	There is one incident command centre occupied by leaders of police, fire and EMS. EMS leader (Incident Commander) is a paramedic of first ALS unit or emergency physician on call. EMS sub leaders are: Treatment officer, Transport officer and Triage officer
24-1. Was VHF radio used for communication during the major incident response? *	No
24-2. Was Tetra radio used for communication during the incident response? *	Yes
24-2.1. Was there any failures with the Tetra radio communication during the incident response? *	Yes
24-2.2. Please specify tetra radio failure *	Too busy network that was just about to collapse
24-3. Were other type of radios used for communication during the incident response? *	No
24-4. Were mobile phones used for communication during the incident response? *	Yes
24-4.1. Were there any mobile phone failures during the incident response? *	Yes
24-4.2. Please specify mobile phone failure *	Too crowded network did not allow EMS to call
24-5. Was land line telephone used for communication during the incident response? *	No
24-6. Was communication to the public (such as television, social media) used during the incident response? *	Yes
24-6.1. Please specify mode of communication *	Hospital Incident Commander gave regular press conferences during incident
24-6.2. Were there any failures to communication means specified in 24-6.1? *	Unknown
24-7. Were other means of communication used during the incident response? *	Unknown
25. Please state communication systems in use on a daily basis *	<ul style="list-style-type: none"> • Tetra radio • Mobile phone
26-1. Incident time *	2007-11-07

Hour *	11
Minutes *	43
26-1.1. Is the time given above exact or estimated? *	Exact
26-2. Emergency Medical Service (EMS) notification *	2007-11-07
Hour *	11
Minutes *	44
26-2.1. Is the time given above exact or estimated? *	Exact
26-3. First EMS arrival *	2007-11-07
Hour *	11
Minutes *	55
26-3.1. Is the time given above exact or estimated? *	Exact
26-4. Major incident declared *	2007-11-07
Hour *	12
Minutes *	25
26-4.1. Is the time given above exact or estimated? *	Estimated
26-5. Medical command established *	2007-11-07
Hour *	11
Minutes *	55
26-5.1. Is the time given above exact or estimated? *	Exact
26-6. Time of first meeting between police / fire / medical command *	2007-11-07
Hour *	12
Minutes *	20
26-6.1. Is the time given above exact or estimated? *	Estimated
26-7. First patient evacuated by EMS (time of leaving incident scene) *	2007-11-07
Hour *	Between 1pm and 2pm

26-8. Last patient evacuated by EMS (time of leaving incident scene) *	2007-11-07
Hour *	14
Minutes *	06
26-8.1. Is the time given above exact or estimated? *	Exact
26-9. First patient arriving in hospital *	2007-11-07
Hour *	14
Minutes *	45
26-9.1. Is the time given above exact or estimated? *	Exact
26-10. Last patient arriving in hospital *	2007-11-07
Hour *	15
Minutes *	15
26-10.1. Is the time given above exact or estimated? *	Estimated
27. Please describe any delays in the timings mentioned in question 26	Security issues: police did not allowed EMS to enter the building
28-1. Were lay persons with no field care education present? *	No
28-2. Were non-EMS personnel with basic life support (BLS) competency present? *	Yes
28-2.1. Please state number of persons/personnel *	10
28-2.2. Is the number given above exact or estimated? *	Estimated
28-3. Were EMS professionals who were not physicians, but with BLS competency present? *	Yes
28-3.1. Please state number of persons/personnel *	10
28-3.2. Is the number given above exact or estimated? *	Estimated
28-4. Were EMS professionals who were not physicians, but with Advanced Life Support (ALS) competency present? *	Yes
28-4.1. Please state number of persons/personnel	15

*

28-4.2. Is the number given above exact or estimated? *	Estimated
28-5. Were on-scene physicians with ALS competency present? *	Yes
28-5.1. Please state number of persons/personnel *	4
28-5.2. Is the number given above exact or estimated? *	Exact
28-6. Were other type of personnel/persons present at the incident scene? *	Yes
28-6.1. Please specify other *	Police officers, Tactical EMS, Fire officers
28-6.2. Please state number of persons/personnel *	20
28-6.3. Is the number given above exact or estimated? *	Estimated
29-1. EMS transport: Where there any EMS vehicles present at scene during the early EMS response to the incident? *	Yes
29-1.1. If possible, please specify the approximate numbers of EMS vehicles available at the incident scene. Returning EMS vehicles are to be counted only once. Please provide time of arrival for the first EMS vehicle.	13
Date	2007-11-07
Hour	11
Minutes	55
29-2. EMS transport: Where there any EMS helicopters present at scene during the early EMS response to the incident? *	No
29-3. EMS transport: Where there any EMS boats present at scene during the early EMS response to the incident? *	No
29-4. EMS transport: Where there other EMS transportation units present at scene during the early EMS response to the incident? *	Yes
29-4.1. Please specify type of other EMS transport *	Due to weather restrictions, HEMS unit arrived by fast car

29-4.2. If possible, please specify the approximate numbers of other EMS transportation units available at the incident scene. Returning EMS transportation units are to be counted only once. Please provide time of arrival for the first other EMS transportation unit.

1

Date 2007-11-07

Hour 12

Minutes 18

29-5. Civilian transport: Where there any civilian vehicles present at scene during the early EMS response to the incident? * Yes

29-5.1. If possible, please specify the approximate numbers of civilian vehicles available at the incident scene. Returning civilian vehicles are to be counted only once. Please provide time of arrival for the first civilian vehicle.

1

Date 2007-11-07

Hour 13

Minutes 15

29-6. Civilian transport: Where there any civilian helicopters present at scene during the early EMS response to the incident? * No

29-7. Civilian transport: Where there any civilian boats present at scene during the early EMS response to the incident? * No

29-8. Civilian transport: Where there other civilian transportation units present at scene during the early EMS response to the incident? * No

29-9. Other emergency services: Where there any other emergency vehicles present at scene during the early EMS response to the incident? * No

29-10. Other emergency services: Where there any other emergency helicopters present at scene during the early EMS response to the incident? * No

29-11. Other emergency services: Where there any other emergency boats present at scene during the early EMS response to the incident? * No

29-12. Other emergency services: Where there No

any other means of transport present at scene during the early EMS response to the incident? *	
30-1. Was there any equipment available on-scene to provide care for patients exposed to hazardous materials? *	No
30-2. Was there any search and rescue equipment available on-scene? *	No
30-3. Was there any alpine/rescue equipment available on-scene? *	No
30-4. Was equipment from the coast guard available on-scene? *	No
30-5. Were support vehicles available on-scene? *	No
30-6. Was other type of equipment available on-scene enabling EMS to do their job? *	No
31. Number of hospitals receiving patients *	1
32-1.1. Distance from incident scene where pre-hospital medical response was initiated to hospital I by air line in kilometers *	31-50
32-1.2. Type of hospital I *	Major hospital with trauma specialty
32-1.3. Were patients conveyed to this hospital by EMS? *	Yes
32-1.4. Were patients conveyed to this hospital by non-EMS? *	No
32-1.5. Were patients conveyed in the first hour after the incident? *	No
32-1.6. Were patients conveyed between 1 and 2 hours after the incident? *	No
32-1.7. Were patients conveyed between 2 and 3 hours after the incident? *	Yes
32-1.8. Were patients conveyed between 3 and 4 hours after the incident? *	Unknown
32-1.9. Were patients conveyed after 4 hours or more following the incident? *	No
32-1.10. Does a pre-existing patient distribution plan exist? *	No
32-1.11. Please explain any pre-existing patient distribution plan/s and give any comments on decision making, delays etc. *	only 1 trauma unit in Helsinki

Patient characteristics

33-1. Were more people than those who were directly affected at risk from incident (e.g number of passengers on a train/ship)? *	Yes
33-1.2. What was the estimated number of people at risk from the incident? *	200-299
33-1.3. Please explain how the above number of population at risk was reached *	Report of Investigation Commission of the accident
34-1. Gender: Were any males affected? *	Yes
34-1.2. Number of males affected *	100-199
34-1.3. Is the number given above exact or estimated? *	Estimated
34-2. Gender: Were any females affected? *	Yes
34-2.2. Number of females affected *	100-199
34-2.3. Is the number given above exact or estimated? *	Estimated
34-3. Were there any unidentified/missing victims? *	No
35-1. Were there any neonates (0-30 days) requiring attention of EMS? *	No
35-2. Were there any infants (1 month-2 years) requiring attention of EMS? *	No
35-3. Were there any young children (2-6 years) requiring attention of EMS? *	No
35-4. Were there any children (6-12 years) requiring attention of EMS? *	No
35-5. Were there any adolescent (12-18 years) requiring attention of EMS? *	Yes
35-5.2. Number of adolescent requiring attention of EMS *	200-299
35-5.3. Is the number given above exact or estimated? *	Estimated

36-1. Were there any dead on-scene/ dead before any medical care was provided? *	Yes
36-1.2. Number of dead on-scene *	8
36-1.3. Is the number given above exact or estimated? *	Exact
37-1. Were there any dead before arrival at hospital (initial treatment started, but dead before transport to hospital)? *	No
38-1. Were there any dead upon arrival at hospital? *	No
39-1. Were there any deaths of those admitted to the hospital within 30 days of the event? *	Yes
39-2. Is data collection of thirty day mortality of those admitted to hospital considered complete? *	Yes
40. Was a pre-hospital triage system used? *	Yes
40-1. Who performed the pre-hospital on-scene triage? *	EMS personnel
40-2. Which triage system was used? *	Start
41-1. Were there any patients in category red = immediate? *	Yes
41-2. Were there any patients in category yellow = urgent? *	No
41-3. Were there any patients in category green = minor/delayed? *	Yes
41-3.2. Number of patients in category green *	13
41-3.3. Is the number given above exact or estimated? *	Exact
41-3.4. Please provide the data source from which these numbers originate *	Report of Investigation Commission
41-4. Were there any patients in category black = deceased? *	Yes
41-4.2. Number of patients in category black *	8
41-4.3. Is the number given above exact or estimated? *	Exact
41-4.4. Please provide the data source from which these numbers originate *	Report of Investigation Commission

41-5. Were there any patients in other categories than those mentioned above? *	No
42-1. Were there patients with minor injuries? Here defines as: patients attended by EMS or medical staff at a primary health care facility, but not admitted to hospital *	No
43. Was there any over-or undertriage? *	No
44-2.1. What was the total number of patients admitted to hospital? *	14
44-2.2. Is the number given above exact or estimated? *	Exact
44-2.3. Please provide the data source from which these numbers originate *	Report of Investigation Commission
45-1. Did any patients sustain blunt trauma? *	No
45-2. Did any patients sustain penetrating trauma? *	Yes
45-2.2. Number of patients with penetrating trauma *	14
45-2.3. Is the number given above exact or estimated? *	Exact
45-2.4. Please provide the data source from which these numbers originate *	EMS files, Report of Investigation Commission
45-3. Did any patients sustain burns? *	No
45-4. Did any patients sustain drowning? *	No
45-5. Did any patients sustain asphyxiation? *	No
45-6. Did any patients sustain hypothermia? *	No
45-7. Did any patients sustain intoxication/poisoning? *	No
45-8. Did any patients sustain infectious disease? *	No
45-9. Did any patients sustain acute psychiatric symptoms? *	Unknown
45-10. Did any patients sustain nuclear or radiological injury? *	No
45-11. Did any patients sustain biological injury? *	No

45-12. Did any patients sustain chemical injury? No

*

45-13. Did any patients sustain other type of injury? No

46-1. Were any patients admitted to critical care area? Yes

Key lessons

47. During the pre-hospital emergency medical response to this major incident, were there any particular problems that may be improved in future major incidents? Yes

47-1. In what area/s did the problem/s occur? Other

47-6. Other: Please specify other problems that were encountered and may be improved in future major incidents Communication with police

48. During the pre-hospital emergency medical response to this major incident, were there any particular successes that may enhance the response to future major incidents? No

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